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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,007	02/09/2004	Kui-Chiu Kwok	13992	2533
7590 09/22/2005			EXAMINER	
Lisa M. Soltis Illinois Tool Works Inc. 3600 West Lake Avenue Glenview, IL 60025			BOECKMANN, JASON J	
			ART UNIT	PAPER NUMBER
			3752	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/775,007

Applicant(s)

KWOK ET AL.

Examiner

Jason J. Boeckmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/9/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/9/04</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because:
  - a. The drawings include extra materials such as dimensions and dimension lines; see figure 2 for example.
  - b. Figures 8 and 9 each show grooves that are not mentioned in the specification.
  - c. It is not clear what groove reference number 24 is pointing to and where that groove is in figures 2 and 4; see "groove" in figures 8 and 9.
  - d. The symbols for crosshatching used in the drawing should be consistent with those of Rule 37 CFR 1.84(n). See MPEP § 608.02(ix).
  - e. The arrows used in the drawing should be consistent with those of Rule 37 CFR 1.84(r).
2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show:
  - a. "the lumen which is circular in cross-section," (page 5, line 22).
  - b. the "lumen which is circular in cross-section," (page 5, line 26).
  - c. "the lumen through seal 26," (page 5, line 30).
  - d. "the lumen 28 of the powder delivery tube 14," (page 6, line 6).
  - e. "the lumen of reducing section 42," (page 6, line 18-9).
  - f. "the lumen of expanding section 44," (page 6, line 22).
  - g. "the lumens of reducing section 142 and expanding section 144," (page 6, line 28).

as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore the following features must be shown or canceled from the claims:

- a. the first section as described in claim 1, lines 3-4.
- b. the first expander section of claim 2, line 2.
- c. the first reducer section of claim 3, line 1.
- d. the lumen of the first expander section of claim 4, line 1.
- e. the lumen of the first reducer section of claim 6, line 1.
- f. the first member including a second reducer section including a lumen of claim 8, lines 2-3.
- g. the first feature as described in claim 8, line 3.
- h. the second member including a second expander section including a lumen of claim 8, lines 3-4.
- i. the second feature as described in claim 8, line 4.

- j. the second reducer section including a lumen of claim 9, line 2.
- k. the second expander section of claim 9, lines 2-3.
- l. the first reducer section disclosed in claim 12, line 4.
- m. the first expander section disclosed in claim 12, line 4.

No new matter should be entered.

5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

6. Claims 1-18 are objected to because of the following informalities: The claim language is not consistent with the specification. For example, the terms first reducer

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section and first expander section in the claims (see claim 2 and 3) do not refer to the same reducer section and expander section as in the specification (see page 6, line 16).

The same problem also arises with the second reducer section and second expander section of the claims (see claim 8, line 2). Appropriate correction is required.

7. Claim 7 is objected to because of the following informalities: Claim 7 is worded exactly as claim 5. Applicant must cancel claim 7 or amend it to present a different dependency. Appropriate correction is required.

8. Claims 2-11 and 13-18 are objected to because of the following informalities: Applicant is inconsistent on how the invention is claimed. Claims 1 and 12 refer to a "dispenser for dispensing" and the remainder of the claims refer to an "apparatus". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 4 recites the limitation "lumen" in line 1. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 6 recites the limitation "lumen" in line 1. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 11 recites the limitation "lumen" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim.

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13. Claims 4, 6, 8-9, 11, 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The word "lumen" is not identified in the specification or shown in the drawings. It is unclear as to what the word "Lumen" is referring to throughout the indicated claims.

***Claim Rejections - 35 USC § 102***

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-7, and 12-18, as well as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by LeCompte (5,704,825).

16. LeCompte shows a dispenser (20) for dispensing pulverulent coating material including an opening (44) through which the pulverulent material is discharged and a conduit (40) through which the pulverulent material is transported from a source (column 3, lines 14-5), a first section of the conduit (40) adjacent to the opening (44) having a cross-section transverse to the direction of the flow of the pulverulent material through the first section, the cross-section being generally rectangular (figure 2). With respect to claim 12, the conduit (40) includes a first reducer section (38) and a first expander section (22) both being generally rectangular. With respect to claims 2, 3 and 5, the first section includes a first expander section (22) and the dispenser (20) includes a first reducer section (38) upstream from the first expander section (22), the first



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reducer section (38) includes a cross-section transverse to the direction of the flow of the pulverulent material, the cross-section being generally rectangular (figure 2). In regards to claims 4, 14, 15, and 17, as well as understood, the expander section (22) includes a first cross sectional area at the inlet end (24) and a second cross sectional area at the outlet (44), the cross sectional area increasing uniformly from the first cross sectional area (24) to the second (44). In regards to claims 6, 13 and 16, as well as understood, the reducer section (38) includes a third cross sectional area at the inlet end and a fourth cross sectional area at the outlet (24), the cross sectional area decreasing uniformly from the third cross sectional area to the fourth (24). In regards to claim 18, the transverse cross-sections of both the first reducer section (22) and first expander section (38) are rectangular (figure 2).

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

19. Claims 8-11 are rejected, as best understood, under 35 U.S.C. 103(a) as being unpatentable over Hollstein et al (6,105,886) in view of LeCompte (5,704,825).

20. Hollstein et al shows a dispenser (10) for dispensing pulverulent coating material including a seal member (48), a first member (14) including a second reducer section (figure 2), including a lumen and a first feature (49), and a second member (11) including a second expander section (figure 2) including a lumen and a second feature (47). The second reducer section is provided in a first structural component (49) and the second expander section is provided in a second structural component (11), which is adapted to be selectively coupled to the first structural component. The dispenser includes a seal member (48) for sealing the coupling between the first and second structural components. In regards to claim 10, the second reducer section includes a second cross-section at an outlet end and the second expander section includes a third cross-section at the inlet end and the seal member provides a transition from the second cross-section to the third cross-section (figure 2). Hollstein et al does not show a first section of the conduit adjacent to the opening having a cross-section transverse to the direction of the flow of the pulverulent material through the first section, the cross-section being generally rectangular. However, LeCompte discloses a dispenser (20) for dispensing pulverulent coating material including an opening (44) through which the pulverulent material is discharged and a conduit (40) through which the pulverulent material is transported from a source (column 3, lines 14-5), a first section of the conduit (40) adjacent to the opening (44) having a cross-section transverse to the direction of the flow of the pulverulent material through the first section, the cross-section being

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generally rectangular (figure 2). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to substitute the first reducer and expander sections having a rectangular cross-section of LeCompte for the outlet device of Hollstein et al in order to discharge an even coat of pulverulent spray from the dispenser.

### ***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jaubertie (6,726,130) shows a dispenser with a reducing section. Buschor (4,802,625) discloses a dispenser for spraying powder with a reducer and expander section.


22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason J. Boeckmann whose telephone number is (571) 272-2708. The examiner can normally be reached on 7:30 - 5:00 m-f, first Friday off.

23. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Scherbel can be reached on (571) 272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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24. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JJB JSB 9-19-05



**David A. Scherbel**  
**Supervisory Patent Examiner**  
**Group 3700**